UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,191	03/19/2004	Martin Baumert	ATOCM-0349	6742

23599 7590 07/27/2007
MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
2200 CLARENDON BLVD.
SUITE 1400
ARLINGTON, VA 22201

EXAMINER	
AUGHENBAUGH, WALTER	
ART UNIT	PAPER NUMBER
1772	

MAIL DATE	DELIVERY MODE
07/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/804,191	BAUMERT ET AL.	
	Examiner	Art Unit	
	Walter B. Aughenbaugh	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2007 and 03 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *19 and 20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 21-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/30/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement of Applicant's Amendments

1. Applicant's amendments in claims 1-9, 11-14 and 18-20 in the Amendment filed January 30, 2007 (Amdt. A) have been received and considered by Examiner.

2. New claims 21-23 presented in Amdt. A have been received and considered by Examiner.

3. Applicant's amendments in claims 1 and 9 in the Amendment filed May 3, 2007 (Amdt. B) have been received and considered by Examiner. Amdt. B was filed in response to the Restriction Requirement mailed April 19, 2007.

WITHDRAWN REJECTIONS

4. All rejections made of record in the previous Office Action mailed May 31, 2006 have been withdrawn due to Applicant's arguments in Amdt. A and Amdt. B.

Election/Restrictions

5. Applicant's election with traverse of Group I, claims 1-8, 10-18 and 21-23 in the reply filed on May 3, 2007 is acknowledged.

6. The traversal regarding Groups I and II is on the ground(s) that "the copolyamide is defined the same in both the combination and the subcombination". This is not found persuasive because the graft copolymer is not defined "the same" in claims 1 and 9, at least because of the presence of "consisting" in claim 9, and absence of "consisting" in claim 1. The basis for restriction between Groups I and II of record has not been specifically addressed.

Regardless, Group II, claim 9, has been rejoined with Group I due to Examiner's reconsideration of the restriction requirement.

7. The traversal regarding Groups II (claim 9) and III is on the ground(s) that "the Restriction fails to explain how the material of claim 9 is made...". Since claim 9 has been rejoined with Group I due to Examiner's reconsideration of the restriction requirement, this basis for traversal is moot.

8. The restriction requirement between the Group of claims 1-18 and 21-23 and the Group of claims 19 and 20 is maintained. Applicant has not distinctly and specifically pointed out any alleged error in the restriction requirement these Groups.

9. Applicant's election of species (i) in the reply filed on May 3, 2007 is also acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the species restriction requirement, the species election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Objections

10. Claim 8 is objected to because of the following informalities: "am" (line 2) should be changed to "an". Appropriate correction is required.

NEW REJECTIONS

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1, 5, 7-9, 21 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 1, the recitation "based on polyamides and graft copolymers having polyamide blocks" (lines 1-2) renders the claim indefinite because this recitation makes the scope of compositions that Applicant intends to delineate unclear: since this recitation recites "polyamides and graft copolymers" (with both "polyamide[]" and "copolymer[]" in plural form), it is unclear whether or not Applicant intends to recite that the multilayer structure comprises plural "polyamides" and plural "graft copolymers", because, eventhough the recitation "based on..." does not necessarily require that the final product actually comprises every component upon which the final product is "based on", the presence of plural "polyamides" and plural "graft copolymers" in the claim language suggests that the multilayer structure must comprise plural "polyamides" and plural "graft copolymers". Clarification and/or correction is required.

In further regard to claim 1, the recitation "said unsaturated monomer (X) being attached by grafting or copolymerization via its double bond" (lines 10-11) renders the claim indefinite because it cannot be ascertained to what component of the copolymer Applicant intends to recite that the unsaturated monomer is attached: is the unsaturated monomer attached to the backbone of the graft copolymer or to the at least one polyamide graft (or to both)? Clarification and/or correction is required.

Claim 5 is indefinite because the language of claim 5 contradicts terminology established in claim 1 and the standard knowledge of one of ordinary skill in the art: claim 1 recites that the "unsaturated monomer (X)" is a monomer ("unsaturated monomer (X)"), so "copolymers" cannot be X (claim 5 recites "...X is chosen from... copolymers and... copolymers") because copolymers are not monomers. X cannot be any of the polymers claimed in claim 5. X must be a monomer, as required by claim 1. Correction is required.

Claim 7 recites the limitation "the layer (2) of graft copolymers" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does not positively recite/require that layer (2) comprises plural "graft copolymers".

In further regard to claim 7, claim 7 recites the limitation "the layer (3)" in line 2. There is insufficient antecedent basis for this limitation in the claim.

In further regard to claim 7, the recitation "the inner layer in contact with the transported fluid" (lines 2-3) renders the claim indefinite since it cannot be ascertained whether or not Applicant intends to require that "the transported fluid" is a component of the claimed structure.

Claim 8 recites the limitation "the layer (2) of graft copolymers" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does not positively recite/require that layer (2) comprises plural "graft copolymers".

In further regard to claim 8, claim 8 recites the limitation "the layer (3)" in line 3. There is insufficient antecedent basis for this limitation in the claim.

In further regard to claim 8, the recitation "the inner layer in contact with the transported fluid" (lines 3-4) renders the claim indefinite since it cannot be ascertained whether or not Applicant intends to require that "the transported fluid" is a component of the claimed structure.

In regard to claim 9, while the language and punctuation could be more clear as to what term (the material, the graft copolymer, or even the polyamide blocks) exactly "consist[s]" of the backbone and the at least one polyamide graft, the term that would most reasonably consist of a backbone and at least one graft is the graft copolymer (clarification is required if this is not the intended meaning of the claim language and punctuation): if this reading of the claim is correct, the embodiment of the claim where the unsaturated monomer is "attached by grafting" falls

outside of the scope delineated by the claim language because the claim language requires that the graft copolymer consists of backbone and the at least one polyamide graft, and the unsaturated monomer that is "attached by grafting [to some component/s of the copolymer]" is something other than the backbone and the at least one polyamide graft.

In further regard to claim 9, the recitation "said unsaturated monomer (X) being attached by grafting or copolymerization via its double bond" (lines 8-9) renders the claim indefinite because it cannot be ascertained to what component of the copolymer Applicant intends to recite that the unsaturated monomer is attached: is the unsaturated monomer attached to the backbone of the graft copolymer or to the at least one polyamide graft (or to both)? Clarification and/or correction is required.

In regard to claim 21, the claim language does not specify which layer Applicant intends "layer" (line 1) to describe (layer (1), layer (2) or layer (2a)?).

In regard to claim 23, the final composition of polyolefin (B) that Applicant intends to recited in all embodiments (especially embodiments (a), (b) and (d)) cannot be ascertained because of the recitation "formed from" in claim 15, especially when combined with the recitations in embodiments (a), (b) and (d) that pertain to methods of forming the polyolefin (B) ("... being cografted by...", "... the reaction of... which is grafted or copolymerized") and to statements that leave the recited compositions open to further chemical reaction ("... which is grafted or copolymerized", "able to react to form a crosslinked phase"). All of the compositions recited in claim 23 read on an intermediate composition of whatever final compositions are intended to be recited in claim 23 (due to *the combination of the recitations* "formed from" in claim 15 *and the recitations* "... being cografted by...", "... the reaction of...", "able to react to

form a crosslinked phase" of claim 23), so it cannot be ascertained what Applicant intends to recite as the composition of the polyolefin (B) in the final product.

In further regard to claim 23, what is cografted to what in embodiment (a)? Two components of a blend cannot be cografted to each other because the structure of two components cografted to each other is a copolymer, not a blend. The recitation "[a] blend being cografted" means to one of ordinary skill in the art that the blend of polymers includes a polymer grafted onto at least one component (i.e. at least one polymer) of the blend, but it cannot be ascertained if this is what Applicant intends to recite since it is not clear what is grafted onto at least one component of the blend, or if the claimed blend even is intended to be a blend (due to "cografted": the structure of two polymers grafted together is a copolymer, not a blend).

In further regard to claim 23, what is intended to be recited by "being cografted by [the recited acid or acid anhydride]"? The recitation "being cografted by [the recited acid or acid anhydride]" plainly does not require that the acid or acid anhydride is present in the final composition (after cografting).

In further regard to claim 23, what is the final structure of the composition of embodiment (b)? What is "grafted or copolymerized" to what?

In further regard to claim 23, it cannot be ascertained whether or not the final structure of the composition of embodiment (d) is required to be crosslinked: the language "to form a crosslinked phase" suggests that the final structure of the composition is crosslinked, but "able to react to form" makes it unclear whether the final structure of the composition must be crosslinked, eventhough "to form a crosslinked phase" suggests that the final structure of the composition is crosslinked.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 1, 2, 4-18 and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Schmitz et al. (U.S. Patent No. 6,794,048).

In regard to claim 1, Schmitz et al. teach a multilayer structure comprising a first layer (layer I of Schmitz et al.) comprising a polyamide (col. 1, lines 51-54), and a second layer (layer II of Schmitz et al.) comprising a graft copolymer, where the graft copolymer comprises a polyolefin backbone functionalized by an unsaturated monomer and at least one polyamide graft (col. 1, lines 51-67 and col. 3, lines 7-37), where the graft copolymer is obtained by reaction between a polyamide having an amine end group and the residue of the unsaturated monomer having a functional group capable of reacting with the amine end group of the polyamide (col. 3, lines 15-30), and where the unsaturated monomer is attached to the polyolefin backbone by grafting or copolymerization via its double bond (col. 3, lines 24-30).

In regard to claim 2, Schmitz et al. teach that the multilayer structure comprises a third layer (layer III of Schmitz et al.) that comprises a polyolefin (col. 1, line 51-col. 2, line 2 and col. 2, lines 52-65).

In regard to claim 4, Schmitz et al. teach that the unsaturated monomer is an unsaturated carboxylic acid anhydride (col. 3, lines 15-30, particularly, line 22).

Claim 5 cannot be treated on its merits due to the indefiniteness of the claim. See 35 U.S.C. 112 rejection of claim 5 made of record in this Office Action.

In regard to claim 6, Schmitz et al. teach that the structure is in the form of a tank (a container for storing liquids or gases would be considered a tank), container, film or tube (pipes, lines) (col. 7, lines 36-50).

In regard to claim 7, Schmitz et al. teach an additional layer (additional interior layer of Schmitz et al.) as the innermost layer (i.e. the layer that is in direct contact with the interior of the container) (col. 7, lines 51-55).

In regard to claim 8, Schmitz et al. teach the structure is a tube (pipes, lines) (col. 7, lines 36-47) and that the tube comprises an additional layer (additional interior layer of Schmitz et al.) as the innermost layer (i.e. the layer that is in direct contact with the interior of the container) (col. 7, lines 51-55). The recitation "for use in a cooling circuit for am [sic] internal combustion engine" is an intended use phrase that has not been given patentable weight, since it has been held that a recitation with respect to the manner in which a claimed article is intended to be employed does not differentiate the claimed article from a prior art article satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQd 1647 (1987).

In regard to claim 9, Schmitz et al. teach a material (the material of layer II of Schmitz et al., col. 1, lines 51-67 and col. 3, lines 7-37) in the shape of a tank (a container for storing liquids or gases would be considered a tank), container, film or tube (pipes, lines) (col. 7, lines 36-50) where the material comprises a graft copolymer having polyamide blocks (col. 3, lines 7-37), where the graft copolymer consists of a polyolefin backbone and at least one polyamide graft, where the polyolefin backbone is functionalized by an unsaturated monomer and at least one

polyamide graft (col. 1, lines 51-67 and col. 3, lines 7-37), where the graft copolymer is obtained by reaction between a polyamide having an amine end group and the residue of the unsaturated monomer having a functional group capable of reacting with the amine end group of the polyamide (col. 3, lines 15-30), and where the unsaturated monomer is attached to the polyolefin backbone by grafting or copolymerization via its double bond (col. 3, lines 24-30).

In regard to claim 10, Schmitz et al. teach a multilayer structure comprising a first layer (sheathing layer of Schmitz et al.) comprising a polyamide (polyether ester amides or polyether amides, col. 8, lines 17-18) (col. 8, lines 4-18), a tie layer (additional bonding agent, col. 8, lines 8-12) and a layer (layer II of Schmitz et al.) comprising a graft copolymer, where the graft copolymer comprises a polyolefin backbone functionalized by an unsaturated monomer and at least one polyamide graft (col. 1, lines 51-67 and col. 3, lines 7-37), where the graft copolymer is obtained by reaction between a polyamide having an amine end group and the residue of the unsaturated monomer having a functional group capable of reacting with the amine end group of the polyamide (col. 3, lines 15-30), and where the unsaturated monomer is attached to the polyolefin backbone by grafting or copolymerization via its double bond (col. 3, lines 24-30).

In regard to claim 11, Schmitz et al. teach a multilayer structure comprising a polyamide or a polyolefin layer (sheathing layer of Schmitz et al., col. 8, lines 4-18) superposed on a layer (layer II of Schmitz et al.) comprising a graft copolymer, where the graft copolymer comprises a polyolefin backbone functionalized by an unsaturated monomer and at least one polyamide graft (col. 1, lines 51-67, col. 3, lines 7-37 and col. 8, lines 4-18), where the graft copolymer is obtained by reaction between a polyamide having an amine end group and the residue of the unsaturated monomer having a functional group capable of reacting with the amine end group of

the polyamide (col. 3, lines 15-30), and where the unsaturated monomer is attached to the polyolefin backbone by grafting or copolymerization via its double bond (col. 3, lines 24-30). Schmitz et al. teach that the multilayer structure comprises a tie layer (additional bonding agent, col. 8, lines 8-12) placed between the polyamide or a polyolefin layer (sheathing layer of Schmitz et al.) and the layer (layer II of Schmitz et al.) comprising the graft copolymer (col. 1, lines 51-67, col. 3, lines 7-37 and col. 8, lines 4-18).

In regard to claim 12, Schmitz et al. teach a multilayer structure comprising a first layer (sheathing layer of Schmitz et al.) comprising a polyamide (polyether ester amides or polyether amides, col. 8, lines 17-18) (col. 8, lines 4-18), a tie layer (additional bonding agent, col. 8, lines 8-12) and a layer (layer II of Schmitz et al.) comprising a graft copolymer, where the graft copolymer comprises a polyolefin backbone functionalized by an unsaturated monomer and at least one polyamide graft (col. 1, lines 51-67 and col. 3, lines 7-37), where the graft copolymer is obtained by reaction between a polyamide having an amine end group and the residue of the unsaturated monomer having a functional group capable of reacting with the amine end group of the polyamide (col. 3, lines 15-30), and where the unsaturated monomer is attached to the polyolefin backbone by grafting or copolymerization via its double bond (col. 3, lines 24-30). Schmitz et al. teach a multilayer structure further comprises a polyolefin layer (layer III of Schmitz et al.) superposed on the layer comprising the graft copolymer and a tie layer (layer I of Schmitz et al.) placed between the layer comprising the graft copolymer and the polyolefin layer (layer III of Schmitz et al.) (col. 1, line 51-col. 2, line 2).

In regard to claim 13, Schmitz et al. teach that the polyolefin backbone is a polyolefin homopolymer or copolymer (col. 3, lines 10-52).

In regard to claim 14, Schmitz et al. teach that an unsaturated epoxide or an unsaturated carboxylic acid anhydride are suitable monomers as the unsaturated monomer (col. 3, lines 15-30, particularly, lines 22-23).

In regard to claim 15, Schmitz et al. teach that the first layer (layer I of Schmitz et al.) is formed from a polyamide/polyolefin blend having a polyamide matrix (col. 1, line 54 and col. 2, lines 37-52, particularly, col. 2, lines 41-44).

In regard to claim 16, Schmitz et al. explicitly teach that all of the claimed polyamides except PA-6/6,6 are suitable polyamides for the first layer (layer I of Schmitz et al.).

In regard to claims 17 and 18, Schmitz et al. teach the structure as discussed above in regard to claims 10 and 11. Polyether ester amides and polyether amides are taught as suitable materials for the additional bonding agent (col. 8, lines 4-18), and polyether ester amides and polyether amides are copolyamides because they are copolymers that comprise amide repeating units.

In regard to claim 21, Schmitz et al. teach that the first layer (layer I of Schmitz et al.) comprises a blend of a polyamide and at least one copolymer having polyamide blocks and polyether blocks (col. 2, lines 33-38 and lines 3-7).

In regard to claim 22, Schmitz et al. teach the multilayer structure as discussed above in regard to claim 15. Schmitz et al. teach that the percentage of polyamide in the blend is less than 100% (since it is a blend) and greater than or equal to 60% by weight (since Schmitz et al. teach that the percentage of "other thermoplastic[]" is "[u]p to 40% by weight", col. 2, lines 37-41), a range that overlaps with the claimed range of 40 to 75% by weight.

Claim 23 cannot be treated on its merits due to the indefiniteness of the claim. See 35 U.S.C. 112 rejection of claim 23 made of record in this Office Action.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz et al. (U.S. Patent No. 6,794,048).

Schmitz et al. teach the structure as discussed above in regard to claim 1. Schmitz et al. teach that a carboxyl group is a suitable group for functionalization of the polyolefin backbone (col. 3, lines 15-27), and that the functional group can be introduced to the polyolefin via copolymerization with the olefin (col. 3, lines 24-27). Therefore, one of ordinary skill in the art would have recognized to have functionalized the olefin (such as ethylene) with an alkyl(meth)acrylate monomer, which comprises a carboxyl group in the acrylate portion of the monomer, since monomers comprising carboxyl groups such as alkyl(meth)acrylate monomer,

are well known monomers for functionalization of the polyolefin backbone of a polyolefin/polyamide graft copolymer comprising polyamide grafts as taught by Schmitz et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have functionalized the olefin (such as ethylene) with an alkyl(meth)acrylate monomer, which comprises a carboxyl group in the acrylate portion of the monomer, since monomers comprising carboxyl groups such as alkyl(meth)acrylate monomer, are well known monomers for functionalization of the polyolefin backbone of a polyolefin/polyamide graft copolymer comprising polyamide grafts as taught by Schmitz et al.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B. Aughenbaugh whose telephone number is (571) 272-1488. While the examiner sets his work schedule under the Increased Flexitime Policy, he can normally be reached on Monday-Friday from 8:45am to 5:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Walter B. Aughenbaugh
7/23/07

7/23/07